

WHAT IS CLAIMED:

1 1. A polystyrene composition or styrene
2 copolymer composition comprising a white oil as a
3 plasticizer, wherein the white oil comprises a
4 Fischer-Tropsch derived oil.

1 2. The composition of claim 1, in which the
2 Fischer-Tropsch derived white oil has a kinematic
3 viscosity at 100 °C of more than 2 mm²/sec.

1 3. The composition of claim 2, in which the
2 Fischer-Tropsch derived white oil has a kinematic
3 viscosity at 100 °C of more than 7 mm²/sec.

1 4. The composition of claim 2, in which the
2 Fischer-Tropsch derived white oil has a content of
3 mineral hydrocarbons with carbon numbers less than 25
4 of not more than 5% wt and an average molecular
5 weight not less than 480 g/mol.

1 5. The composition of claim 1 in which the
2 composition comprises between 0.1 wt% and 10 wt% of
3 the Fischer-Tropsch derived oil.

1 6. The composition of claim 5, in which the
2 composition comprises between 2 wt% and 5 wt% of the
3 Fischer-Tropsch derived oil.

1 7. The composition of claim 1, in which the
2 Fischer-Tropsch derived oil has a Saybolt color
3 greater than +25.

1 8. The composition of claim 7, in which the
2 pour point of the Fischer-Tropsch derived oil is
3 below -10 °C.

1 9. The composition of claim 8, in which the
2 content of polar compounds in the Fischer-Tropsch
3 derived oil is less than 1 wt% and the content of
4 non-cyclic isoparaffins is between 75 wt% and 98 wt%.

1 10. The composition of claim 9, in which the
2 composition comprises between 0.1 wt% and 10 wt% of
3 the Fischer-Tropsch derived oil.

1 11. The composition of claim 10, in which the
2 composition comprises between 0.1 wt% and 10 wt% of
3 the Fischer-Tropsch derived oil.

1 12. The composition of claim 11, in which the
2 Fischer-Tropsch derived oil has a kinematic viscosity
3 at 100 °C of more than 2 mm²/sec.

1 13. The composition of claim 12, in which the
2 Fischer-Tropsch derived white oil has a content of
3 mineral hydrocarbons with carbon numbers less than 25
4 of not more than 5 wt% and an average molecular
5 weight of not less than 480 g/mol.

1 14. The composition of claim 13, in which the
2 Fischer-Tropsch derived oil has a 5 wt% recovery
3 boiling point above 391 °C.

1 15. A process for preparing a white oil
2 comprising:

3 (a) hydrocracking/hydroisomerizing a Fischer-
4 Tropsch derived feed, wherein compounds having at
5 least 60 or more carbon atoms and compounds having at
6 least 30 carbon atoms in the Fischer-Tropsch derived
7 feed have a weight ratio of at least 0.2 wt% and
8 wherein at least 30 wt% of compounds in the Fischer-
9 Tropsch derived feed have at least 30 carbon atoms;

10 (b) separating the product of step (a) into one
11 or more lower boil distillate fraction(s) and a
12 higher boiling white oil precursor fraction;

13 (c) performing a pour point reducing step to the
14 white oil precursor fraction obtained in step (b);
15 and,

16 (d) isolating the white oil by distilling the
17 product of step (c).

1 16. The process of claim 15, in which the
2 Fischer-Tropsch derived feed comprises a C₂₀₊ fraction
3 having an ASF-alpha value of at least 0.925.

1 17. The process of claim 15, in which the
2 Fischer-Tropsch derived feed has an initial boiling
3 point below 200 °C.

1 18. The process of claim 15, in which the
2 hydrocracking/hydroisomerizing in step (a) is
3 performed in the presence of hydrogen and a catalyst.

1 19. The process of claim 15, in which the
2 white oil precursor of step (b) has a T_{10 wt%} boiling
3 point between 300 °C and 450 °C.

1 20. The process of claim 15, in which the
2 pour point reducing step (c) comprises catalytic
3 dewaxing.

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